L Number	Hits	Search Text	DB	Time stamp
1	304	((titanium near5 (alkoxide or ethoxide or butoxide or propoxide or isopropoxide or methoxide or pentoxide)) same water) same (ammonia or amine or ethanolamine or diethanolamine or diisopropanolamine or triethanolamine or alkanolamine)	USPAT; US-PGPUB	2004/02/25 07:36
2	258	(((titanium near5 (alkoxide or ethoxide or butoxide or propoxide or isopropoxide or methoxide or pentoxide)) same water) same (ammonia or amine or ethanolamine or diethanolamine or diisopropanolamine or triethanolamine or alkanolamine)) and aqueous	USPAT; US-PGPUB	2004/02/25 07:36
3	9	((((titanium near5 (alkoxide or ethoxide or butoxide or propoxide or isopropoxide or methoxide or pentoxide)) same water) same (ammonia or amine or ethanolamine or diethanolamine or diisopropanolamine or triethanolamine or alkanolamine)) and aqueous) and titanic	USPAT; US-PGPUB	2004/02/25 07:43
4	55	"5409683"	USPAT; US-PGPUB	2004/02/25 07:45
5	1	"20020000532"	USPAT; US-PGPUB	2004/02/25 07:46
6	1	"20020000532" and (titanic with acid with ion)	USPAT; US-PGPUB	2004/02/25 08:02
7	1429	acetol or acetoin	USPAT; US-PGPUB	2004/02/25 08:03

L Number	Hits	Search Text	DB	Time stamp
-	5279	titanium with alkoxide	USPAT; US-PGPUB	2004/02/25 07:14
-	460401	amine or ammonia	USPAT; US-PGPUB	2004/02/24 12:36
-	1552	titanic	USPAT; US-PGPUB	2004/02/24 12:38
-	79	(titanium with alkoxide) and (amine or ammonia) and titanic	USPAT; US-PGPUB	2004/02/24 12:38
-	72	water and ((titanium with alkoxide) and (amine or ammonia) and titanic)	USPAT; US-PGPUB	2004/02/24 14:32
-	1	water and ((titanium with alkoxide) and (amine or ammonia) and titanic)	EPO; JPO; DERWENT	2004/02/24 14:34
-	57	water and (titanium with alkoxide) and (amine or ammonia)	EPO; JPO; DERWENT	2004/02/25 07:14

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NEWS  3  SEP 09   CA/CAplus records now contain indexing from 1907 to the
                  present
NEWS  4  DEC 08   INPADOC: Legal Status data reloaded
NEWS  5  SEP 29   DISSABS now available on STN
NEWS  6  OCT 10   PCTFULL: Two new display fields added
NEWS  7  OCT 21   BIOSIS file reloaded and enhanced
NEWS  8  OCT 28   BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS  9  NOV 24   MSDS-CCOHS file reloaded
NEWS 10  DEC 08   CABA reloaded with left truncation
NEWS 11  DEC 08   IMS file names changed
NEWS 12  DEC 09   Experimental property data collected by CAS now available
                  in REGISTRY
NEWS 13  DEC 09   STN Entry Date available for display in REGISTRY and CA/CAplus
NEWS 14  DEC 17   DGENE: Two new display fields added
NEWS 15  DEC 18   BIOTECHNO no longer updated
NEWS 16  DEC 19   CROPU no longer updated; subscriber discount no longer
                  available
NEWS 17  DEC 22   Additional INPI reactions and pre-1907 documents added to CAS
                  databases
NEWS 18  DEC 22   IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19  DEC 22   ABI-INFORM now available on STN
NEWS 20  JAN 27   Source of Registration (SR) information in REGISTRY updated
                  and searchable
NEWS 21  JAN 27   A new search aid, the Company Name Thesaurus, available in
                  CA/CAplus
NEWS 22  FEB 05   German (DE) application and patent publication number format
                  changes

NEWS EXPRESS  DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT
              MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
              AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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=> s titanium and water and (ammonia or amine)
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command can only be used to look at the index in a file which has an
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FULL ESTIMATED COST 0.21 0.21

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=> **s titanium and water and (ammonia or amine)**
L1 2855 TITANIUM AND WATER AND (AMMONIA OR AMINE)

=> **s l1 and titanic acid**
L2 31 L1 AND TITANIC ACID

=> **d l2 1-31 all**

L2 ANSWER 1 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
Full Text | Citing References
AN 2002:778517 CAPLUS
DN 137:296989
ED Entered STN: 11 Oct 2002
TI Method for the preparation of oxide powders
IN Cho, Woo-Seok; Kim, Tae-Wan
PA S. Korea
SO U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C01G023-04
NCL 423598000
CC 49-3 (Industrial Inorganic Chemicals)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002146365	A1	20021010	US 2002-109969	20020329
	CN 1380254	A	20021120	CN 2002-2106077	20020409
	JP 2002356326	A2	20021213	JP 2002-106213	20020409
PRAI	KR 2001-18567	A	20010409		

AB A highly pure oxide powder can be prepd. by a simple process comprising hydrothermally reacting oxide precursors in the presence of a metal complex-forming ligand, e.g., EDTA (EDTA), NTA (nitrotriacetic acid), DCTA (trans-1,2-diaminocyclohexanetetracetic acid), DTPA (diethylenetriaminepentacetic acid), EGTA [bis(aminoethyl) glycol ether -N,N,N',N'-tetraacetic acid], PDTA (propylenediaminetetracetic acid), BDTA (2,3-diaminobutane-N,N,N',N'-tetraacetic acid), and derivs. thereof.
ST high purity oxide powder
IT **Amines**, reactions
Ligands
Quaternary ammonium compounds, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(method for the prepn. of oxide powders)
IT 12013-47-7P, Calcium zirconate (CaZrO3) 12032-30-3P, Magnesium titanate (MgTiO3) 12047-27-7P, Barium titanate (BaTiO3), preparation 239136-84-6P, Barium calcium **titanium** zirconium oxide (Ba0.9Ca0.1Ti0.7Zr0.3O3) 467253-61-8P, Hafnium strontium **titanium** oxide (Hf0.1SrTi0.9O3) 467253-62-9P 467253-63-0P, Barium cerium lead **titanium** oxide (Ba0.8Ce0.1Pb0.2Ti0.9O3)
RL: IMF (Industrial manufacture); PREP (Preparation)
(method for the prepn. of oxide powders)
IT 60-00-4, EDTA, reactions 62-54-4, Calcium acetate 67-42-5, EGTA 67-43-6, DTPA 74-89-5, Methylamine, reactions 75-59-2,

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Tetramethylammonium hydroxide 77-98-5, Tetraethylammonium hydroxide 110-86-1, Pyridine, reactions 121-44-8, Triethylamine, reactions 139-13-9, NTA 142-72-3, Magnesium acetate 543-80-6, Barium acetate 543-94-2, Strontium acetate 546-68-9, **Titanium** tetraisopropoxide 917-70-4, Lanthanum acetate 1305-62-0, Calcium hydroxide, reactions 1306-38-3, Cerium oxide, reactions 1309-42-8, Magnesium hydroxide 1314-23-4, Zirconium oxide, reactions 1798-13-6, BDTA 1939-36-2, PDTA 2052-49-5, Tetrabutylammonium hydroxide 3087-36-3, **Titanium** tetraethoxide 3087-37-4 4499-86-9, Tetrapropylammonium hydroxide 7440-32-6D, **Titanium**, alkoxides and halides 7440-45-1D, Cerium, alkoxides and halides 7440-58-6D, Hafnium, alkoxides and halides 7440-67-7D, Zirconium, alkoxides and halides 7550-45-0, **Titanium** tetrachloride, reactions 7664-41-7, **Ammonia**, reactions 7699-43-6, Zirconium chloride oxide (ZrCl2O) 7732-18-5, **Water**, reactions 7758-95-4, Lead chloride 7786-30-3, Magnesium chloride, reactions 10022-31-8, Barium Nitrate 10042-76-9, Strontium Nitrate 10043-52-4, Calcium chloride, reactions 10099-58-8, Lanthanum chloride 10099-59-9, Lanthanum Nitrate 10099-74-8, Lead Nitrate 10108-73-3, Cerium nitrate (Ce(NO3)3) 10124-37-5, Calcium Nitrate 10361-37-2, Barium chloride, reactions 10377-60-3, Magnesium Nitrate 10476-85-4, Strontium chloride 12026-28-7, **Titanic acid** (H2TiO3) 12055-23-1, Hafnium oxide 13291-61-7, DCTA 13463-67-7, **Titanium** oxide, reactions 13746-89-9, Zirconium Nitrate 13826-66-9 14507-19-8, Lanthanum hydroxide 14644-61-2, Zirconium sulfate 15347-57-6, Lead acetate 15509-05-4, Nitric acid, Hafnium(4+) salt 15823-43-5, Hafnium sulfate 16833-27-5D, Oxide, alkoxides 17194-00-2, Barium hydroxide 17309-53-4, Cerium Nitrate 18130-44-4, **Titanium** sulfate 18480-07-4, Strontium hydroxide 19783-14-3, Lead hydroxide 22465-17-4, **Titanium** Nitrate 24670-27-7, Cerium sulfate
RL: RCT (Reactant); RACT (Reactant or reagent)
(method for the prepn. of oxide powders)

L2 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 2001:464247 CAPLUS
DN 135:63253
ED Entered STN: 28 Jun 2001
TI Molecular recognition imprint coatings for selective functionalized mesoporous sorbents for separation processes and sensors
IN Dai, Sheng; Burleigh, Mark C.; Shin, Yongsoon
PA University of Tennessee Research Corporation, USA; U. T. Battelle, LLC
SO U.S., 18 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM B01D015-08
NCL 210656000
CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 4, 9, 61, 71
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6251280	B1	20010626	US 1999-396067	19990915
PRAI US 1999-396067		19990915		

AB High-capacity mesoporous sorbents with mol. recognition capability are prepd. through a mol. imprinting technique in which the template mol., which is specific to capture a small org. mol., is bound by a bifunctional ligand to a complexing metal cation, which includes reactive ligands that react with and bind the template to the substrate. This mol. recognition capability extends to a small mol. that can fit into the pores of the substrate. Typical templates are complexes of a divalent metal cation with a trialkoxysilylalkyl-terminated 1,2-diamine or polyamine. The

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mesoporous sorbent is prepd. by: (1) mixing an imprint coating precursor and an ordered mesoporous substrate to form a coated substrate in which the coating comprises the template bound by the bifunctional ligand, (2) treating the coated mesoporous substrate with an acid soln., (3) evapg. the mixt., and (4) titrating the coated mesoporous substrate to a neutral pH to form the sorbent. These sorbents have application in the sepn. and removal of metal cations from wastewater, paints, etc.; detection of target mols. (e.g., amino acids, pharmaceuticals, herbicides, fertilizers, explosives, etc.); chromatog. active phases; imaging agents; sensors; coatings; and composites.

ST mol recognition imprinting mesoporous sorbent; metal complexation mol recognition sorbent; template metal complexation mol recognition sorbent; drug recognition sensor sorbent

IT Cations
(complexation and removal of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Wastewater treatment
Water purification
(complexation; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Drugs
Electrolytes
Herbicides
Ion channel blockers
Ionophores
(detection of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Aldehydes, processes
Amides, processes
Amines, processes
Carbohydrates, processes
Carboxylic acids, processes
Cytokines
Esters, processes
Ethers, processes
Ketones, processes
Monokines
Neurotransmitters
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); RCT (Reactant); ANST (Analytical study); PROC (Process); RACT (Reactant or reagent)
(detection of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Amino acids, processes
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(detection of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Fertilizers
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(detection of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Paints
(metal ion removal from; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Coating materials
Composites
Molecular recognition
(mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Sensors

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(selective sites for; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Adsorbents
Chromatographic stationary phases
Complexing agents
Imaging agents
(selective; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Hormones, animal, processes
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); RCT (Reactant); ANST (Analytical study); PROC (Process); RACT (Reactant or reagent)
(small, detection of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT Materials processing
(templates; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT 1760-24-3, 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- 4420-74-0, 3-(Trimethoxysilyl)propanethiol 13822-56-5, 1-Propanamine, 3-(trimethoxysilyl)- 35112-74-4, 2,13-Dioxa-7,8-dithia-3,12-disilatetradecane, 3,3,12,12-tetramethoxy- 35141-36-7, 1-Propanaminium, N,N,N-trimethyl-3-(trimethoxysilyl)-, chloride 51826-92-7, Phosphonic acid, [3-(trimethoxysilyl)propyl]-, diethyl ester 68845-16-9, 1,2-Ethanediamine, N,N'-bis[3-(trimethoxysilyl)propyl]- 68845-16-9D, 1,2-Ethanediamine, N,N'-bis[3-(trimethoxysilyl)propyl]-, Schiff base derivs. 105038-23-1, Propanedioic acid, [3-(trimethoxysilyl)propyl]-, diethyl ester 213892-01-4, Guanidine, [3-(trimethoxysilyl)propyl]-, monohydrochloride 346420-08-4 346420-09-5
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(bifunctional ligand; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT 7440-18-8, Ruthenium, processes 7704-34-9, Sulfur, processes 7723-14-0, Phosphorus, processes 7782-49-2, Selenium, processes 12586-59-3, Proton 12596-26-8, Hg22+, processes 13426-91-0 14127-61-8, Calcium(2+), processes 14263-10-6 14280-50-3, Lead(2+), processes 14302-87-5, Mercury(2+), processes 14333-20-1 14333-24-5 14627-67-9, Thallium(3+), processes 14701-21-4, Silver(1+), processes 14701-22-5, Nickel(2+), processes 14878-41-2 14913-52-1, Neodymium(3+), processes 15078-28-1 15121-26-3, Vanadium(2+), processes 15158-11-9, Copper(2+), processes 15365-75-0 15438-31-0, Ferrous ion, processes 15543-40-5, Zirconium(4+), processes 16065-83-1, Chromium(3+), processes 16065-87-5, Molybdenum(6+), processes 16065-88-6, Palladium(2+), processes 16065-89-7, Rhodium(3+), processes 16065-90-0, Cerium(4+), processes 16065-91-1, Gold(3+), processes 16065-92-2, Thorium(4+), processes 16089-60-4, Uranium(4+), processes 16096-89-2, Lanthanum(3+), processes 16397-91-4, Manganese(2+), processes 16637-16-4, Uranyl ion(2+) 17341-24-1, Lithium(1+), processes 17341-25-2, Sodium(1+), processes 17493-86-6, Copper(1+), processes 18459-37-5, Cesium(1+), processes 18472-30-5, Erbium(3+), processes 18540-29-9, Chromium(6+), processes 18923-26-7, Cerium(3+), processes 18923-27-8, Ytterbium(3+), processes 20074-52-6, Ferric ion, processes 20644-97-7, Vanadyl(2+) 20681-14-5, Gold(1+), processes 21057-99-8, Neptunyl ion(1+) 21175-08-6, Molybdenum(4+), processes 22537-20-8, Beryllium(2+), processes 22537-22-0, Magnesium(2+), processes 22537-23-1, Aluminum(3+), processes 22537-29-7, Scandium(3+), processes 22537-31-1, Vanadium(5+), processes 22537-33-3, Gallium(3+), processes 22537-39-9, Strontium(2+), processes 22537-40-2, Yttrium(3+), processes 22537-41-3, Niobium(5+), processes 22537-48-0, Cadmium(2+), processes 22537-49-1, Indium(3+), processes 22537-51-5, Antimony(5+), processes 22537-56-0, Thallium(1+), processes 22537-58-2, Polonium(2+), processes 22541-12-4, Barium(2+), processes 22541-14-6, Praseodymium(3+), processes 22541-17-9, Samarium(3+), processes 22541-18-0, Europium(3+), processes 22541-19-1, Gadolinium(3+), processes 22541-20-4, Terbium(3+), processes

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22541-21-5, Dysprosium(3+), processes 22541-22-6, Holmium(3+), processes 22541-23-7, Thulium(3+), processes 22541-24-8, Lutetium(3+), processes 22541-27-1, Tungsten(6+), processes 22541-28-2, Rhenium(7+), processes 22541-41-9, Plutonium(6+), processes 22541-42-0, Curium(3+), processes 22541-43-1, Californium(3+), processes 22541-44-2, Plutonium(4+), processes 22541-46-4, Americium(3+), processes 22541-53-3, Cobalt(2+), processes 22541-54-4, processes 22541-56-6, Bromine(1+), processes 22541-63-5, Cobalt(3+), processes 22541-70-4, Plutonium(3+), processes 22541-75-9, **Titanium**(3+), processes 22541-77-1, Vanadium(3+), processes 22541-84-0, Molybdenum(5+), processes 22541-90-8, Tin(2+), processes 22542-08-1, Iridium(4+), processes 22542-10-5, Platinum(2+), processes 22555-00-6, Iridium(3+), processes 22578-82-1, Neptunium(4+), processes 22967-92-6, Methylmercury(1+) 23713-46-4, Bismuth(3+), processes 23713-48-6, Antimony(3+), processes 23713-49-7, Zinc(2+), processes 24203-36-9, Potassium(1+), processes
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)
(complexation and removal of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT 50-36-2, Cocaine 50-99-7, Glucose, processes 52-67-5, Penicillamine 52-90-4, L-Cysteine, processes 56-40-6, Glycine, processes 56-41-7, L-Alanine, processes 56-45-1, Serine, processes 56-84-8, L-Aspartic acid, processes 56-84-8D, L-Aspartic acid, salts 56-85-9, Glutamine, processes 56-86-0, L-Glutamic acid, processes 56-86-0D, L-Glutamic acid, salts 56-87-1, Lysine, processes 56-89-3, L-Cystine, processes 59-67-6, Nicotinic acid, processes 60-18-4, Tyrosine, processes 61-90-5, Leucine, processes 63-68-3, Methionine, processes 70-47-3, L-Asparagine, processes 71-00-1, Histidine, processes 72-18-4, Valine, processes 73-22-3, Tryptophan, processes 73-32-5, Isoleucine, processes 74-79-3, L-Arginine, processes 107-43-7, Betaine 107-97-1, Sarcosine 118-92-3, Anthranilic acid 118-96-7, TNT 327-57-1, Norleucine 372-75-8, Citrulline 407-41-0 499-83-2, Dipicolinic acid 556-50-3, Diglycine 565-71-9, Isoserine 627-01-0, N-Ethylglycine 672-15-1, Homoserine 1068-84-4, Aminomalonic acid 6600-40-4, Norvaline 7093-67-6, Pentaglycine 13073-35-3, Ethionine 38082-72-3, Sarcosylglycine 45084-14-8, L-Glutamic acid, N-carboxy-(59981-63-4, Spinacine
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); RCT (Reactant); ANST (Analytical study); PROC (Process); RACT (Reactant or reagent)
(detection of; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

IT 57-09-0, Cetyltrimethylammonium bromide 78-10-4, Tetraethylorthosilicate 112-02-7, Cetyltrimethylammonium chloride 546-68-9, Tetraisopropylorthotitanate 681-84-5, Tetramethylorthosilicate 1071-76-7, Zirconium (IV) butoxide 1305-62-0, Calcium hydroxide, reactions 1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, reactions 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, reactions 1336-21-6, Ammonium hydroxide 2081-12-1, 2-Propanol, 2-methyl-, zirconium(4+) salt (4:1) 2171-98-4, Zirconium(IV) isopropoxide 3087-36-3, Tetraethylorthotitanate 3087-37-4, Tetrapropylorthotitanate 3087-39-6, 2-Propanol, 2-methyl-, **titanium**(4+) salt 4766-57-8, Tetrabutylorthosilicate 5593-70-4, Tetrabutylorthotitanate 10193-36-9D, Silicic acid, org. esters 14475-63-9D, Zirconic acid, org. esters 20338-08-3D, **Titanic acid**, org. esters 23519-77-9, Tetrapropylzirconate
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(reagent, for prepn. of mesoporous substrates; mol. recognition imprint coatings for selective functionalized mesoporous sorbents for sepn. processes and sensors)

RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD

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(50) Yu, K; Anal Sci 1992, V8, P701 CAPLUS
(51) Zhang, W; J Am Chem Soc 1996, V118, P9164 CAPLUS

L2 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1997:374157 CAPLUS
DN 127:23839
ED Entered STN: 14 Jun 1997
TI Incorporation of inorganic oxides in dyes for manufacture of antibacterial fibers
IN Tanaka, Atsushi; Jono, Katsuhiro
PA Catalysts and Chemicals Industries Co., Ltd., Japan

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SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61L002-16
ICS A01N025-04; A01N025-12; A01N059-16; C08K009-02; D06M011-32; B01J013-00
CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 40
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09084860	A2	19970331	JP 1995-273559	19950927
PRAI JP 1995-273559		19950927		

AB An antibacterial fiber is obtained by contacting the fibers with a colloidal soln. of antibacterial inorg. oxides in a dye bath. This method is simple and economical. **Titanium** sulfate dissolved in **water** was treated with **ammonia** soln. to give a white slurry, which was filtered and washed with **water**. The obtained cake was dispersed in **water**, treated with H2O2, and heated to give a soln. contg. 1 % titania. Next, an aq. soln. contg. silver oxide, **ammonia**, and **water** was mixed with silica sol and a soln. of Zr ammonium carbonate. This mixed aq. soln. was added to the above **titanic acid** soln., then heated to form colloidal particles, which were filtered and washed to give a mixed oxide colloidal soln. A disperse dye (Dianix) was added to the obtained colloidal soln., then polyester fiber was introduced to the mixt. for dyeing.

ST antibacterial inorg oxide fiber dyeing
IT Antibacterial agents
Disperse dyes
Reactive dyes
(incorporation of inorg. oxides in dyes for manuf. of antibacterial fibers)
IT Oxides (inorganic), biological studies
Polyester fibers, biological studies
Synthetic fibers
Zeolites (synthetic), biological studies
RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(incorporation of inorg. oxides in dyes for manuf. of antibacterial fibers)
IT 13463-67-7, Titania, biological studies 20667-12-3, Silver oxide
RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(incorporation of inorg. oxides in dyes for manuf. of antibacterial fibers)

L2 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1995:621764 CAPLUS
DN 123:15945
ED Entered STN: 20 Jun 1995
TI Manufacture of ceramics and sintered metal products and coatings, and the products and coatings obtained
IN Schmidt, Helmut; Nass, Ruediger; Aslan, Mesut; Albayrak, Sener; Arpac, Ertugrul; Koenig, Theo; Fister, Dietmar
PA H.C. Starck GmbH und Co. KG, Germany; Institut fuer Neue Materialien Gemeinnuetzige GmbH
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C04B035-628
ICS B22F001-00; B22F003-22; C04B041-85; C23C024-00; C03C017-00

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CC 57-2 (Ceramics)
Section cross-reference(s): 56

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 650945	A2	19950503	EP 1994-116229	19941014
	EP 650945	A3	19951102		
	EP 650945	B1	19970813		
	R: CH, DE, FR, GB, IT, LI, LU, NL, SE				
	DE 4336694	A1	19950504	DE 1993-4336694	19931027
	US 5590387	A	19961231	US 1994-321416	19941011
	CA 2134180	AA	19950428	CA 1994-2134180	19941024
	JP 07232965	A2	19950905	JP 1994-283957	19941025
	RU 2139839	C1	19991020	RU 1994-39287	19941026
	CN 1105918	A	19950802	CN 1994-113669	19941027
	CN 1076719	B	20011226		
	TW 406062	B	20000921	TW 1994-83109903	19941027
PRAI	DE 1993-4336694	A	19931027		

AB The process comprises forming a dispersion, in an aq. or polar solvent as dispersing medium, of nanocryst. ceramic or metal powder, <1% of the particles of which deviate >40%, and no particles of which deviate >60% from the av. particle size, in the presence of ≥1 low-mol. wt. org. compds. contg. ≥1 functional groups that are capable of reacting or interacting with the groups present on the surface of the particles, removing the dispersing medium, and sintering the surface-modified powder after molding or coating formation. This method permits the formation of high-solids dispersions. Thus, 10 g TiN powder (obtained according to German Patent P 4214719.0) were dispersed in 200 mL **water**-EtOH mixt. (vol. ratio 1), after which 1 g guanidinepropionic acid was dissolved in the liq. Then, 60 g of the modified powder were dispersed under ultrasound in 100 mL **water** under addn. of Bu4NOH to adjust the pH to ~9 to give a slip having solids content 37.5 wt.%. Particle size was 20-50 nm.

ST powder ceramic metal surface modification; dispersion ceramic metal powder sintering; **titanium** nitride guanidinepropionic acid surface modification; polar solvent powder dispersion

IT **Amines**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(C1-12-alkyl; surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)

IT Particle size
(control of; surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)

IT Borides
Carbides
Nitrides
Oxides, uses
Phosphides
Silicides
Sulfides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(powd.; surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)

IT Ceramic materials and wares
Powder metallurgy
(surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)

IT Fatty acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(C1-12, surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)

IT Silanes
RL: NUU (Other use, unclassified); USES (Uses)
(alkoxy, surface modification of ceramic and metal powder for

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high-solids dispersion prepn. in sintered product and coating manuf.)
IT Coating materials
(ceramic, surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT Ceramic materials and wares
(coatings, surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT Carbonyl compounds, uses
RL: NUU (Other use, unclassified); USES (Uses)
(di-, β-, C4-12-alkyl; surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(metal salts, surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT Solvents
(polar, surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT Carboxylic acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(poly-, surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT Ceramic materials and wares
(powd., surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT Ethers, uses
RL: NUU (Other use, unclassified); USES (Uses)
(silyl, surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT 64-17-5, Ethanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(aq.; surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT 1344-28-1, Alumina, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(plates; surface modification of **titanium** nitride powder for high-solids dispersion prepn. in sintered coating manuf.)
IT 7429-90-5, Aluminum, uses 7439-89-6, Iron, uses 7439-98-7, Molybdenum, uses 7440-02-0, Nickel, uses 7440-03-1, Niobium, uses 7440-21-3, Silicon, uses 7440-25-7, Tantalum, uses 7440-32-6, **Titanium**, uses 7440-33-7, Tungsten, uses 7440-42-8, Boron, uses 7440-47-3, Chromium, uses 7440-48-4, Cobalt, uses 7440-58-6, Hafnium, uses 7440-62-2, Vanadium, uses 7440-67-7, Zirconium, uses 25583-20-4, **Titanium** nitride
RL: TEM (Technical or engineered material use); USES (Uses)
(powd.; surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)
IT 353-09-3, Guanidinepropionic acid 12738-89-5D, **Titanic acid**, esters
RL: NUU (Other use, unclassified); USES (Uses)
(surface modification of ceramic and metal powder for high-solids dispersion prepn. in sintered product and coating manuf.)

L2 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1995:506349 CAPLUS
DN 122:233352
ED Entered STN: 25 Apr 1995
TI Antimicrobial colloidal solutions for industrial goods
IN Kino, Katsuhiro; Tanaka, Atsushi; Oohama, Koichi
PA Catalysts & Chem Ind Co, Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.

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CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A01N059-16
ICS A61K033-38
CC 5-2 (Agrochemical Bioregulators)
Section cross-reference(s): 39, 40, 42, 62
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07033616	A2	19950203	JP 1993-198894	19930716
	JP 2988811	B2	19991213		
PRAI	JP 1993-198894		19930716		

AB A soln. contains antimicrobial metals and inorg. oxide particles. The compds. are stable, and active for a long period. For example, **titanium** sulfate was dissolved in **water**, mixed with an **ammonia** soln., filtered, and washed to obtain a **titanic acid** cake, which was then treated with **water**, and a H2O2 soln., and heated. This soln. was combined with a silver-ammine complex soln., a zirconium ammonium carbonate soln. and a silica sol, and heated to give an antimicrobial colloidal soln. The product is added to a paint.
ST silver oxide colloid microbicide industrial goods
IT Colloids
(in manuf. of antimicrobial colloidal solns. for industrial goods)
IT Metals, biological studies
Oxides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(in manuf. of antimicrobial colloidal solns. for industrial goods)
IT Bactericides, Disinfectants, and Antiseptics
Cosmetics
Fungicides and Fungistats
Textiles
(manuf. of antimicrobial colloidal solns. for industrial goods)
IT Plastics
RL: NUU (Other use, unclassified); USES (Uses)
(manuf. of antimicrobial colloidal solns. for industrial goods)
IT Coating materials
(paints, manuf. of antimicrobial colloidal solns. for industrial goods)
IT 1344-28-1, Alumina, biological studies 7440-66-6, Zinc, biological studies 7631-86-9, Silica, biological studies 7722-84-1, Hydrogen peroxide, biological studies 20667-12-3, Silver oxide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(in manuf. of antimicrobial colloidal solns. for industrial goods)

L2 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
Full Text | Citing References
AN 1990:577501 CAPLUS
DN 113:177501
ED Entered STN: 09 Nov 1990
TI Preparation of denitration catalyst
IN Konishi, Kunihiko; Kato, Yasuyoshi; Matsuda, Toshiaki; Tejima, Nobue
PA Babcock-Hitachi K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B01J023-24
ICS B01D053-36; B01J035-02
ICA B01J023-85; B01J037-02
CC 59-4 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 67

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FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02083034	A2	19900323	JP 1988-234225	19880919
PRAI	JP 1988-234225		19880919		

AB A catalyst raw material contg. Ti, V, and Mo or W is heat-treated to reduce the SO42- concn. to ≤4 wt.%, kneaded with a surfactant and an inorg. fiber, and molded. The method prevents coagulation of TiO2 particles, achieves high dispersion of catalyst particles and increases surface area of the micropores. Thus, a 60 kg meta-**titanic acid** slurry (TiO2 30%) was mixed with 4.6 kg NH4 molybdate and 1.2 kg NH4 metavanadate, kneaded under heating to make paste, dried, baked at 550° to form granules contg. 0.8 wt.% SO42-, and pulverized. To form a paste with a **water** content of 30%, 20 kg of the powder was kneaded with 8.4 kg **water** and then mixed with F3225 nonionic surfactant and 3 kg Kaowool (inorg. fiber) by kneading. The catalyst paste was coated onto a band of steel and baked at 500° to give a plate catalyst.

ST waste gas denitration catalyst; nitrogen oxide removal catalyst; sulfate content titania catalyst agglomeration; surfactant catalyst particle dispersion

IT Flue gases
(catalysts for treatment of, **titanium**-vanadium oxides contg. inorg. fibers and surfactants for, prepn. of, sulfate control in, for nitrogen oxide removal)

IT Surfactants
(in prepn. of catalysts for combustion waste gas treatment)

IT Sulfates, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, by heating, in prepn. of catalysts for combustion waste gas treatment)

IT Reduction catalysts
(**titanium**-vanadium oxides contg. inorg. fibers and surfactants for, prepn. of, sulfate control in, for nitrogen oxide removal from combustion waste gases)

IT Kaolin, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(fiber, catalysts contg., for combustion waste gas treatment, Kaowool)

IT Synthetic fibers
RL: CAT (Catalyst use); USES (Uses)
(inorg., catalysts contg., for combustion waste gas treatment)

IT Synthetic fibers
RL: CAT (Catalyst use); USES (Uses)
(kaolin, catalysts contg., for combustion waste gas treatment, Kaowool)

IT 11098-99-0, Molybdenum oxide 11099-11-9, Vanadium oxide 13463-67-7, Titania, uses and miscellaneous 39318-18-8, Tungsten oxide
RL: CAT (Catalyst use); USES (Uses)
(catalysts contg., for combustion waste gas treatment)

IT 109320-53-8, Highcoal F 3225
RL: OCCU (Occurrence)
(dispersant, in prepn. of catalysts for combustion waste gas treatment)

IT 7664-41-7, **Ammonia**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitrogen oxide catalytic removal with, in combustion waste gas treatment)

IT 11104-93-1, Nitrogen oxide, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from combustion waste gases, redn. catalysts for)

L2 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1987:600513 CAPLUS
DN 107:200513

h eb c g cg b cg eb

ED Entered STN: 27 Nov 1987
TI Preparation of rutile type pigment **titanium** white by high activity crystal seeding
IN Li, Qinghua; Xi, Guoxi
PA Henan Normal University, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
IC ICM C01G023-047
CC 42-6 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 85103475	A	19861029	CN 1985-103475	19850430
	CN 1008356	B	19900613		
PRAI	CN 1985-103475		19850430		

AB Seed crystals are prepd. by neutralizing Ti sulfate solns. with dil. NH3 **water** (end point pH = 3.5), washing the Ti(OH)4 with H2O, treating with HCl, and aging. The seed crystals are used to change anatase to rutile with conversion 99%.
ST anatase rutile conversion seed crystal; pigment **titanium** oxide
IT 20338-08-3P, **Titanic acid**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. and reaction of, with hydrochloric acid)
IT 7664-41-7, **Ammonia**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(neutralization by, of **titanium** sulfate)
IT 18130-44-4, **Titanium** sulfate
RL: RCT (Reactant); RACT (Reactant or reagent)
(neutralization of, with **ammonia**)
IT 13463-67-7P, **Titanium** dioxide, uses and miscellaneous
RL: PREP (Preparation); USES (Uses)
(pigments, manuf. of, seed crystals for)
IT 7647-01-0, Hydrochloric acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with **titanic acid**)

L2 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1984:108531 CAPLUS
DN 100:108531
ED Entered STN: 12 May 1984
TI Flue gas denitration catalyst used at high temperatures
PA Hitachi Shipbuilding and Engineering Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC B01J023-30; B01D053-36
CC 59-4 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 67
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58193733	A2	19831111	JP 1982-76956	19820507
PRAI	JP 1982-76956		19820507		

AB A 42% β-**titanic acid** slurry and aq. MeNH2 contg. WO3 were mixed to give WO3-TiO2 ratio 0.1-0.2, evapd. to dryness, calcined at 600-700° for 3 h, pelletized, and screened to 8-14 mesh. A simulated gas contg. 500 ppm NO, 500 ppm NH3, 6.7% O and 10.2% **water** vapor was passed at 1.1 L/min over 6.6 mL of the catalyst to give 80-95%

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NOx removal.
ST tungsten oxide titania denitration catalyst; catalyst flue gas denitration; nitrogen oxide removal flue gas; **ammonia** redn catalyst nitrogen oxide; heat resistance denitration catalyst gas
IT Flue gases
(nitrogen oxide removal from, by redn. with **ammonia**, heat-resistant catalysts for)
IT Reduction catalysts
(**titanium** dioxide-tungsten oxide, heat-resistant, for nitrogen oxide removal from flue gases by redn. with **ammonia**)
IT 1314-35-8, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(catalysts, contg. **titanium** dioxide, heat-resistant, for nitrogen oxide removal from flue gas by redn. with **ammonia**)
IT 13463-67-7, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(catalysts, contg. tungsten oxide, heat-resistant, for nitrogen oxide removal from flue gas by redn. with **ammonia**)
IT 7664-41-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. by, of nitrogen oxides in flue gases with **ammonia**, heat-resistant catalysts for)
IT 11104-93-1, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from flue gases, by redn. with **ammonia**, heat-resistant catalyst for)

L2 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1981:126731 CAPLUS
DN 94:126731
ED Entered STN: 12 May 1984
TI Nitrogen oxide purging catalyst
PA Nippon Steel Corp., Japan; Kyushu Refractories Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC B01J027-02; B01D053-36
CC 59-2 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 67
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55106544	A2	19800815	JP 1979-13529	19790208
PRAI	JP 1979-13529		19790208		

AB Granular Fe ore contg. Fe_2O_3 or $Fe(OH)_3$, TiO_2, and H_2SO_4 are mixed in **water** at 60-90° for ≥1 h, dried, and calcined to contain Fe 35-68, Ti 0.6-29, and S 0.3-15%. The catalyst is SOx-resistant. Thus, **water** 100 mL, H_2SO_4 153, and **titanic acid** slurry (27% TiO_2) 370 g were kneaded, mixed with 750 g limonite (6-12 mesh) at 80° for 2 h, evapd. to dryness at 110°, calcined at 500° for 3 h to contain 6:46:5 Ti-Fe-S, and pelletized to 5.7-8 mm diam. When waste gas from Fe-ore sintering contg. NOx 200, NH_3 (added) 300, SOx 350 ppm, CO 0.9, O 15, CO_2 6, H_2O 10%, and N balance, was passed over the catalyst at 370° and space velocity 5800 h-1, the NOx removal was 99, 99, 95, and 70% at 1, 100, 300, and 500 h.
ST ore sintering waste gas denitrification; catalyst nitrogen oxide redn; iron oxide catalyst denitration; **titanium** oxide catalyst denitration; sulfate catalyst denitration
IT Sulfates, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(catalyst contg., sulfate-resistant, for nitrogen oxide redn. in waste

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gas)
IT Reduction catalysts
(iron oxide and **titanium** oxide and sulfate, sulfur oxide-resistant, for nitrogen oxide redn. in waste gas)
IT Waste gases
(nitric oxide removal from, redn. by **ammonia** in, sulfur oxide-resistant catalyst for)
IT 13463-67-7, uses and miscellaneous
RL: CAT (Catalyst use); USES (Uses)
(catalyst contg., sulfate-resistant, for nitrogen oxide redn. in waste gas)
IT 7664-41-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(redn. by, in nitrogen oxide removal from waste gas, sulfate-resistant catalyst for)
IT 11104-93-1, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from waste gas, redn. by **ammonia** in, sulfur oxide-resistant catalyst for)

L2 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1955:19704 CAPLUS
DN 49:19704
OREF 49:3796g-h
ED Entered STN: 22 Apr 2001
TI Organic derivatives of **titanium**
AU Jacini, Giovanni
CS Staz. sper. ind. olii e grassi, Milan
SO Olii Minerali, Grassi e Saponi, Colori e Vernici (1953), 30, 193-4
CODEN: OMGSAI; ISSN: 0369-7541
DT Journal
LA Unavailable
CC 10 (Organic Chemistry)
AB The mixed anhydrides of Ti(OH)4 with oleic, linolenic, etc. acids, Ti(O2CR)4, are prepd. by heating under a reflux condenser the solns. in anhyd. C6H6 of 4 moles fatty acid with 1 mole TiCl4, distg. off the solvent, and heating the residue on a **water** bath several hours at 16 mm. pressure, then in an oil bath at 120°; the products are always white and difficult to purify. The **amines** Ti(NHR')4 (II) are obtained by heating 1 mole TiCl4 with 8 moles R'NH2, filtering off the R'NH2.HCl, and extg. the residue with petr. ether: the II remain as brown insol. residues.
IT 9,12-Octadecadienyl titanate, (C18H33O)4Ti
9-Octadecenyl titanate, (C18H35O)4Ti
Acetic acid, anhydride with Cl2Ti(OH)2
Chlorotitanic(IV) acids, Cl2Ti(OH)2, anhydrides with carboxylic acids
Hexanoic acid, anhydride with Cl2Ti(OH)2
Linoleic acid, anhydride with H4TiO4
Octadecyl titanate, (C18H37O)4Ti
Oleic acid, anhydride with H4TiO4
Stearic acid, anhydride with H4TiO4
Titanium, dibutoxybis(octylamino)-
Titanium, tetrakis(octadecylamino)-
Titanium, tetrakis(octylamino)-
IT **Titanium** chloride hexanoate
(as anhydride between Cl2Ti(OH)2 and C5H11CO2H)
IT **Titanium** chloride propionate
(as anhydride between Cl2Ti(OH)2 and EtCO2H)
IT **Titanium** acetate chloride, TiCl2(OAc)2
(as anhydride between Cl2Ti(OH)2 and HOAc)
IT 79-09-4, Propionic acid
(anhydrides of, with Cl2Ti(OH)2)

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IT 20338-08-3, **Titanic acid**, H4TiO4
(anhydrides with carboxylic acids)
IT 7440-32-6, **Titanium**
(org. compds.)
IT 1790-25-6, **Titanium**, dibutoxydichloro- 15792-80-0, **Titanium** amide, Ti(NH2)4
(prepn. of)

L2 ANSWER 11 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
Full Text Citing References
AN 1952:35957 CAPLUS
DN 46:35957
OREF 46:6139b-c
ED Entered STN: 22 Apr 2001
TI Amides of orthotitanic acid
IN Boyd, Thomas
PA Monsanto Chemical Co.
DT Patent
LA Unavailable
CC 10 (Organic Chemistry)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2579413		19511218	US	

AB Amides of orthotitanic acid (I) are prepd. by treating TiS2 with a primary or secondary **amine** under anhyd. conditions. **Titanium** tetraanilide, Ti(NHPh)4, a cryst. solid, was prepd. by heating 1 mol. TiS2 in C6H6 with 4 mols. PhNH2 at 50°. The tetrabutylamide, Ti(NHBu)4, a yellowish solid, was prepd. from 6 mols. BuNH2 with 1 mol. TiS2. The tetra(dibutylamide), Ti(Bu2)4, a white cryst. solid, was prepd. from 1 mol. TiS2 with 4 mols. NHBu2. These products are useful as stabilizers for org. thermoplastic materials or as mordants and **water**-repellents in textiles or paper.
IT Waterproofing
(of paper and textiles, **titanic acid** amides for)
IT Amides
(of **titanic acid**)
IT **Amines**
(reactions of, with TiS2)
IT Mordants
(**titanic acid** amides for)
IT **Titanium**, tetraanilino-
Titanium, tetrakis(dibutylamino)-
IT **Titanium** sulfides, TiS2
(reaction with **amines**)
IT 20338-08-3, **Titanic acid**, H4TiO4
(amides)
IT 62-53-3, Aniline 109-73-9, Butylamine 111-92-2, Dibutylamine
(reaction with TiS2)

L2 ANSWER 12 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN
Full Text Citing References
AN 1948:6491 CAPLUS
DN 42:6491
OREF 42:1433h-i,1434c-g
ED Entered STN: 22 Apr 2001
TI Esters of **titanium**. I. Butyl titanate-a new paint vehicle
AU Kraitzer, I.; McTaggart, K.; Winter, G.
SO Australia, Dept. Munitions, Paint Notes (1947), 2, 304-9
DT Journal
LA Unavailable
CC 26 (Paints, Varnishes, and Lacquers)

h eb c g cg b cg eb

AB Et, Bu, Am, Ph, and cresyl titanates, of the general formula (RO)4Ti, were prepd. Films prepd. by drying these compds. were brittle but, nevertheless, the compds. were thought to have a possible value in surface coatings. Bu titanate (I) was preferable, especially over Et titanate, because it was easier to prepare and had less tendency to hydrolyze. Prepn. was by reaction of Bu alc. with TiCl4, the HCl formed being neutralized with **ammonia**. The reaction vessel was cooled to 10° during the latter step, after which the NH4Cl was removed by filtration. The excess Bu alc. was then removed by distn., leaving I as a light brown, mobile liquid, contg. approx. 80% of I and less than 0.2% chloride. The following parts by wt. were used to prepare paint: Bu titanate 100, Et alc. 30, mica 30, TiO2 30 to which was added 0, 2, 4, or 5 parts of H2O, resp. A film from the paint contg. no **water** cracked badly on drying while the films from the paints contg. **water** had this defect only when applied in thick coats. Films dried on glass were resistant to acid and alkali and when partially immersed in H2O for 10 months were not discolored. A quartz rod coated with this paint was held in a furnace at approx. 1000° for 2 weeks during which time the coating became harder and the surface finish smoother. The paint also has fireproofing properties for wood and cardboard. Adhesion and protection on tinplate and steel were not satisfactory, the film becoming powdery. To try to correct this defect the following paint was tried Al flake (xx fine) 30 parts by wt., Bu titanate 50, Beckosol 1323 5, Bu alc. 15. The corrosion-protective properties of an air-dried film of this paint are poor but on heating to 200 to 300° this property is improved. Such a coating will withstand a temp. of 600° for prolonged periods. It is also resistant to thermal shocks as indicated by repeated heating to 600° and immediately plunging in cold **water** with no ill effects. This paint has been tried as a heat-resistant paint in some cases where the flue gases contain both **water** and SO2 and found to give protection to the steel and remain unaffected. On heating, I slowly liberated Bu alc. and increased in viscosity becoming a thermoplastic solid and finally forming an infusible, insol. material. This final product contains the equiv. of 30 to 35% TiO2. This polymerized Bu titanate is suggested as a base for surface coatings.

IT Paperboard
(paint for, butyl titanate fireproofing)

IT Paint
(**titanium** esters as vehicles for)

IT Pentyl titanates, (C5H11O)4Ti
Phenyl titanate, (PhO)4Ti
Tolyl titanate
(as paint vehicle)

IT **Titanic acids**
(esters, as paint vehicles)

IT Butyl titanate, (BuO)4Ti
(manuf. of, and paints from)

IT 3087-36-3, Ethyl titanate
(as paint vehicle)

L2 ANSWER 13 OF 31 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

AN 1938:32098 CAPLUS
DN 32:32098
OREF 32:4406i,4407a-g
ED Entered STN: 16 Dec 2001
TI Preparation of **titanic acid** gel and its adsorptive properties
AU Verkhovskii, S. E.; Verkhovskaya, A. K.; Kartsynel', M. V.
SO Zhurnal Prikladnoi Khimii (Sankt-Peterburg, Russian Federation) (1938), 11, 4-11 (in French 11)
CODEN: ZPKHAB; ISSN: 0044-4618
DT Journal
LA Unavailable

h eb c g cg b cg eb

CC 2 (General and Physical Chemistry)

AB TiCl4, prepd. by chlorinating TiC, was introduced by drops into twice-distd. **water** at -3° while stirring. The resulting H2TiO3 soln. was allowed to stand at room temp. in porcelain dishes for 12-15 days. The period for the coagulation depended on the concn. of TiCl4 in the sol; thus at 7.7% of TiCl4 it was 41 days and for 20% 1 day. The gel formed was placed on a linen stretched on a frame, to sep. the mother liquor. After 2-3 days, the gel was washed with distd. **water** for 2-3 days until the reaction for Ti and Cl ions in the wash **water** was neg. Then the gel was dried at room temp. followed by drying at 110° for 4 hrs. and finally in a muffle furnace at 170-80° in vacuum. The gel contained 4.6% of moisture and had a form of white grains (1 1/2-2 mm.) which, being dropped into **water**, burst into smaller grains. Twenty samples of titania gel were prepd. under various conditions, the best being that prepd. as above but washed twice with H2SO4 (concd.) just before drying at 110°. The adsorption expts. were made in a **water** thermostat at 30°; the titania gel was placed in specially designed test tubes contg. an electrolyte soln. and allowed to stay for 2-3 hrs. for satg. the gel with **water**; then it was added to the electrolyte soln. (no bursting of the gel was observed). The rotation of test tubes in a thermostat was continued for 6 hrs. In all expts. 0.43 g. of gel and 25 cc. of an electrolyte soln. were used. The degree of adsorption was detd. by titrating the soln. with acid or alkali with bromothymol blue as indicator. NaOH (0.0780-0.0105 N), KOH (0.0600-0.0077 N), LiOH (0.0580-0.0033 N) and NH4OH (0.0610-0.0040 N) were adsorbed best by the gel; NaCl (2 N), KCl (2 N), NaOAc (0.049 N), HCO2Na (0.059 N), Na2SO4 (1 N), NaNO3 (2 N) and (CO2Na)2 (0.1 N) were adsorbed by means of hydrolysis, the base formed being adsorbed; 0.2 N HCl, 0.1 N HCl, 0.2 N and 0.1 N H2SO4, 0.159 N HCO2H and 0.142 N (CO2H)2 were not adsorbed at all or very slightly. The adsorption of electrolytes with the titania gel followed the general rules of adsorption with heteropolar adsorbents of acid character. The adsorption of SO2 and NH3 was performed in a volumetric type app. provided with an oil vacuum pump and two Langmuir pumps, which permitted reaching a vacuum of the order 10-5 mm. Hg. The sample of gel first was degased at 80° higher than the temp. desired for the expt., for 6-8 hrs. The adsorption was performed at pressures from 5-7 mm. to 600-610 mm. of Hg, at 0, 42.5, 81 and 120° for SO2 and at 0, 44, 81 and 121° for NH3. The titania gel adsorbed: NH3 1.5 times as much as the gel prepd. by Nikitin and Yur'ev (cf. C. A. 24, 539), SO2 2-2.5 times as much as that prepd. by Klosky (cf. C. A. 25, 450) and both gases 1.5 times as much as the silica-gel prepd. by McGavack and Patrick (cf. C. A. 14, 1776) and Davidhiezer and Patrick (cf. C. A. 16, 1170). The isotherms of adsorption of SO2 and NH3 with titania gel had the form of the usual mol. adsorption without disclosing any activated adsorption. Data are tabulated. Six references.

IT Electrolytes
(adsorption of, by titania gel)

IT Adsorbents
(**titanic acid** gel as)

IT 7446-09-5, Sulfur dioxide
(adsorption of, by TiO2 gel)

IT 7664-41-7, **Ammonia**
(adsorption of, by titania gel)

IT 13463-67-7, **Titanium** oxide, TiO2
(colloidal, prepn. and adsorptive properties of)

L2 ANSWER 14 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 2003-683485 [65] WPIDS

DNN N2003-545624 DNC C2003-187426

TI Photocatalyst material for purification of **water**, comprises photocatalyst particles fixed to surface of substrate containing

h eb c g cg b cg eb

granulated artificial lightweight aggregate coated with glass, using inorganic material as binder.

DC D15 D22 J01 J04 P34

PA (EHIM-N) EHIME KEN PREFECTURE; (EHIM-N) EHIME SAISEKI KK; (TITA-N) TITANIUM KOGYO KK

CYC 1

PI JP 2003144939 A 20030520 (200365)* 9p B01J035-02

ADT JP 2003144939 A JP 2001-353108 20011119

PRAI JP 2001-353108 20011119

IC ICM B01J035-02
ICS A01N025-12; A01N025-34; A01N059-16; A61L009-00; A61L009-20; B01D053-86; B01J021-16; B01J037-02; C02F001-32; C02F001-50; C02F001-72; C09K003-00

AB JP2003144939 A UPAB: 20031009
NOVELTY - A photocatalyst material contains photocatalyst particles fixed to the surface of a substrate, using an inorganic material as binder. The substrate contains granulated artificial lightweight aggregate coated with glass.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) the manufacture of a photocatalyst material, comprising immersing granulated artificial lightweight aggregate coated with glass in an aqueous material comprising inorganic material, photocatalyst particles and **water**, adjusting the photocatalyst particle concentration to 5-30 wt.%, and heat processing at 100-900 deg. C;

(2) photocatalyst stored goods which comprise photocatalyst material in a bag-like or mesh-like storage container comprising fibers, resin, resin molding material, non-woven fabric, ceramic, metal, timber and/or alloy;

(3) the decomposition and removal of harmful gas, comprising irradiating a photocatalyst material or photocatalyst stored goods with ultraviolet radiation; and

(4) **water** purification, comprising adjusting the specific gravity of a photocatalyst material or photocatalyst stored goods such that the material or goods settle and/or float in **water** and irradiating with ultraviolet radiation.

USE - Used for the purification of **water** and the decomposition of harmful gas (both claimed), such as nitrogen oxide, aldehyde, mercaptan, **ammonia** and dioxin, and also for cleaning industrial liquid waste, mining waste, industrial **water**, agricultural **water** and seawater.

ADVANTAGE - The photocatalyst particles are firmly adhered to the substrate, giving a material with good photocatalytic activity, antimicrobial activity and anti-algal activity.

Dwg.0/0

FS CPI GMPI

FA AB

MC CPI: D04-A01P; D09-B; J01-E02D; J04-E04; N07-L01B; N07-L01C

L2 ANSWER 15 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 2002-493824 [53] WPIDS

DNC C2002-140449

TI Preparation of crystalline **titanium** oxide molecular film used as optical functional material, involves forming crystalline **titanium** oxide molecular film of preset thickness in stream boundary surface.

DC E32 J04

PA (JAAT) JAPAN ATOMIC ENERGY RES INST

CYC 1

PI JP 2002104825 A 20020410 (200253)* 4p C01G023-053

ADT JP 2002104825 A JP 2000-295963 20000928

PRAI JP 2000-295963 20000928

IC ICM C01G023-053
ICS B01J021-06; B01J035-02

h eb c g cg b cg eb

AB JP2002104825 A UPAB: 20020820
NOVELTY - Preparation of crystalline **titanium** oxide molecular film involves forming a crystalline **titanium** oxide (TiO2) molecular film of about 1 nm thickness, in a stream boundary surface.
USE - For preparation of crystalline **titanium** oxide molecular film used as optical functional material such as photocatalyst and for forming ceramic thin film of high specific surface area.
ADVANTAGE - The monomolecular film is formed stably in the stream boundary surface with controlled surface pressure and area. The method is more suitable for synthesizing ceramic thin film of high specific surface area. The application range of the monomolecular film is increased.
DESCRIPTION OF DRAWING(S) - The figure shows the change of surface pressure during reduction of trough area at velocity of 15 cm^2/minute, maintaining temperature at 20 deg. C. (Drawing includes non-English language text)
Dwg.1/1
FS CPI
FA AB; GI; DCN
MC CPI: E35-K01; J04-E04; N03-B01

L2 ANSWER 16 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 2002-117598 [16] WPIDS
DNC C2002-036368
TI Decomposition of chlorinated organic compound e.g. dioxin, involves contacting gas having organic compound with catalyst having active ingredient carried on tungsten oxide-**titanium** oxide group complex oxide support.
DC E19 J01 J04
PA (MITU) MITSUBISHI CHEM CORP; (MITU) MITSUBISHI KASEI ENG KK; (NISH) SHOKUBAI KASEI KOGYO KK
CYC 1
PI JP 2001286733 A 20011016 (200216)* 12p B01D053-94
ADT JP 2001286733 A JP 2000-104903 20000406
PRAI JP 2000-104903 20000406
IC ICM B01D053-94
ICS B01J023-30; C07C039-28; C07D319-24
AB JP2001286733 A UPAB: 20020308
NOVELTY - A chlorinated organic compound is decomposed by contacting gas containing chlorinated organic compound with a catalyst. Active ingredient of the catalyst is carried by tungsten oxide-**titanium** oxide (WO3-TiO2) group complex oxide support. The ratio of the support to whole quantity of the catalyst is 70 weight% (wt.%) or more.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for processing method of combustion exhaust gas containing chlorinated organic compound, sulfur dioxide and nitrogen oxide. The gas containing organic chlorinated compound is contacted with low-oxidation-property catalyst (A) and high-oxidation-property catalyst (B) in arbitrary sequence at 100-250 deg. C. **Ammonia** is introduced into combustion exhaust gas when contacted with low oxidation-property catalyst (A), and the concentration of **ammonia** in combustion exhaust gas ejected after processing is set to 20 ppm or less of **ammonia**. Catalyst (A) has sulfur dioxide oxidation conversion ratio of 1.3% or less, and decomposes nitrogen oxide and chlorinated organic compound. The catalyst (B) has sulfur dioxide oxidation conversion ratio of 3% or more, and decomposes chlorinated organic compound. Catalyst (B) contains active component on support comprising complex oxide of tungsten and **titanium**. The oxidation conversion ratio of sulfur dioxide is determined by the relation (sulfur trioxide concentration at outlet/total SOx concentration) multiply 100. The concentration of sulfur trioxide and total SOx concentration at the outlet of reaction tube is determined, by introducing gas comprising 10 dry volume% of oxygen, 500 ppm of sulfur dioxide, 10 volume% of **water**, and remaining nitrogen into reaction tube filled with 450 ml of catalyst,

h eb c g cg b cg eb

at normal pressure, 250 deg. C and space velocity of 1850/Hr.

USE - For processing combustion exhaust gas (claimed) and decomposing chlorinated organic compound such as dioxin contained in combustion exhaust gas ejected from incinerator in which domestic and industrial wastes are treated.

ADVANTAGE - Chlorinated organic compound such as dioxin is decomposed with high efficiency at low temperature. Dioxin once decomposed does not reform. Since the time dependent performance degradation of catalyst is inhibited, chlorinated organic compounds, sulfur oxide and nitrogen oxide are removed from the exhaust gas with high efficiency.

DESCRIPTION OF DRAWING(S) - The figure shows the X-ray diffraction chart of catalyst (A).

Dwg.1/1

FS CPI

FA AB; GI; DCN

MC CPI: E06-A03; E10-E02F1; E10-H04C1; E11-Q02; E31-H01; E34-E; E35; J01-E02D; J04-E01; N02; N03

L2 ANSWER 17 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 2001-293775 [31] WPIDS

DNC C2001-090197

TI **Titanic acid** paste used as snow protection agent for airplane, motor vehicle, comprises **titanium** oxide obtained by hydrolyses of **titanium** sulfate, processed and mixed with vaseline, stearic acid, and masticated.

DC D21 E32 G02

PA (TANA-I) TANAKA H

CYC 1

PI JP 2000344521 A 20001212 (200131)* 7p C01G023-04

ADT JP 2000344521 A JP 1999-194887 19990603

PRAI JP 1999-194887 19990603

IC ICM C01G023-04

ICS A61K007-00; A61K007-42; C09G001-08; C09K003-18

AB JP2000344521 A UPAB: 20010607

NOVELTY - **Titanium** sulfate is hydrolyzed and **titanium** oxide is filtered, mixed with organic acid and urea alcohol. **Titanium** tetrachloride and sulfuric acid are added. Dissolved **titanium** liquid is neutralized with hydrogen peroxide, sodium percarbonate, **ammonia**, alcohol, alcoholate. Small particles are filtered, mixed with vaseline, paraffin, stearic acid, hardened oil, Japan tallow, castor oil, sebacic oil and ground.

DETAILED DESCRIPTION - **Titanium** sulfate is subjected to hydrolysis and **titanium** oxide (TiO2) dissolved in sulfuric acid is deposited by blowing **water** vapor. TiO2 is recovered by filtration, rinsed and subsequently mixed with an organic acid and aqueous urea alcohol after which **titanium** tetrachloride and sulfuric acid are added. Dissolved **titanium** liquid is neutralized with a mixture comprising hydrogen peroxide, sodium percarbonate, **ammonia**, alcohol, alcoholate. Small particles deposited are filtered, mixed with vaseline, paraffin, stearic acid, hardened oil, Japan tallow, castor oil and sebacic oil and masticated. Aqueous **titanic acid** is mixed with a paste of fatty acid to prepare a suntan preventing make-up cream, or with a freezing mixture to prepare a coolant.

An INDEPENDENT CLAIM is also included for **titanic acid** paste.

USE - Used as snow protection agent for airplanes, motor vehicles, satellites, freezing remover for ships, make-up creams for preventing suntan, as coolant, frost preventive paste for coating onto frozen indoor wall surface and applied around the mouth.

ADVANTAGE - **Titanic acid** paste has high abrasion resistance, has excellent **water** repellent property and effectively shields against ultra-violet rays, and frost. The frequency of coat application is reduced. The semi-transparent small particles of TiO2 can be uniformly coated on vehicles and is easily removed by wiping. Addition of fatty acid

h eb c g cg b cg eb

paste to TiO2 prevents skin inflammation.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: D08-B; D08-B09A; E10-C04L2; E35-K02; E35-K03; E35-K04; G02-A05

L2 ANSWER 18 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
Full Text
AN 1999-215580 [19] WPIDS
DNC C1999-063622
TI Preparation of fibrous nanometre potassium titanate - comprises soaking ilmenite ore in concentrated sulphuric acid to produce **titanium** oxide sulphate which is then hydrolysed, dissolving in hydrogen peroxide and **ammonia**, and adding potassium hydroxide.
DC E32
IN TIAN, X; WANG, G; ZHANG, L
PA (SOLI-N) INST SOLID STATE-PHYSICS CHINESE ACAD SC
CYC 1
PI CN 1202462 A 19981223 (199919)* 1p C01G023-00
ADT CN 1202462 A CN 1997-106995 19970612
PRAI CN 1997-106995 19970612
IC ICM C01G023-00
AB CN 1202462 A UPAB: 19990518
Ilmenite ore is soaked in concentrated sulphuric acid to produce **titanium** oxide sulphate which is hydrolysed to produce meta-**titanic acid**; the meta-**titanic acid** is then dissolved with H2O2 and **ammonia water** to produce meta-**titanic acid** solution, potassium hydroxide solution is finally dropped into meta-**titanic acid** to produce precipitate which is calcinated to obtain fibrous nanometer potassium titanate with fiber length of 30-300 nm. The fiber length of fibrous nanometer potassium titanate thus produced can be regulated by the calcination temperature and the potassium hydroxide solution concentration. The present invention can prepare product with high purity and even fiber.
Dwg.0/0
FS CPI
FA AB
MC CPI: E35-K04

L2 ANSWER 19 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
Full Text
AN 1997-358089 [33] WPIDS
DNC C1997-115079
TI Polymer coagulating agent for meta-**titanic acid** in **titanium** di oxide production - comprises **water**-soluble polymer containing salts or quaternary compounds of di methyl **amine** propyl acrylamide monomer.
DC D15 E32 J01
PA (HYMO-N) HYMO CORP
CYC 1
PI JP 09150011 A 19970610 (199733)* 6p B01D021-01
ADT JP 09150011 A JP 1995-332509 19951129
PRAI JP 1995-332509 19951129
IC ICM B01D021-01
ICS C01G023-04; C02F001-56
AB JP 09150011 A UPAB: 19990914
A polymer coagulating agent (A) is made of **water** soluble polymer (B) containing 20-100 mol% of salts or quaternary compounds of dimethyl aminopropyl acrylamide monomer and 80-0 mol% of acrylamide monomer. Using (A) for coagulating meta-**titanic acid** is also claimed.
USE - Used for coagulating meta-**titanic acid** in the white liquid generated in the production process of **titanium** dioxide.
ADVANTAGE - The product does not hydrolyse at high temperature (70

h eb c g cg b cg eb

deg. C) white liquid which contains 40% sulphuric acid and is able to coagulate meta-**titanic acid** efficiently.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: D04-A01B; D04-B07; E35-K04; J01-F01

L2 ANSWER 20 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
Full Text
AN 1995-260187 [34] WPIDS
DNC C1995-118226
TI Nitrogen oxide(s) decomposition catalyst - comprises rutile-type titania carrying vanadium, molybdenum and/or tungsten cpd(s). and anatase type titania.
DC E36 J01 J04
PA (HITG) BABCOCK-HITACHI KK
CYC 1
PI JP 07163875 A 19950627 (199534)* 5p B01J023-22
ADT JP 07163875 A JP 1993-312210 19931213
PRAI JP 1993-312210 19931213
IC ICM B01J023-22
ICS B01D053-86; B01D053-94; B01J023-28; B01J023-30; B01J033-00
AB JP 07163875 A UPAB: 19951114
The catalyst (A) is a mixture of (B) rutile-type **titanium** oxide carrying at least one compound of V, Mo, and W. (C) is anatase-type **titanium** oxide. (A) is used as decomposition catalyst of nitrogen oxide using **ammonia** as reducing agent.
Two ways of preparing (A) are also claimed.
In an example, 67 kg of aqueous slurry of meta-**titanic acid** contg. 30 wt.% of **titanium** oxide and 8 wt.% of sulphate ion was added with 3.59 kg of para ammonium tungstate and 1.29 kg of meta ammonium vanadate and kneaded with heating kneader to form a paste (**water** content = 50%), which was mixed with anatase-type **titanium** hydroxide powder (specific surface area = 330 m2/g) at a mixing ratio of (99/1) to (1/1) and further kneaded, extruded, dried, and sintered at 550deg.C for 2 hours, ground to give powder (D). A net made of glass fibre carried a paste of (D), **water**, and inorganic fibre, and was dried and heated at 550deg.C for 2 hours.
ADVANTAGE - High activity in the reduction reaction of nitrogen oxides in the coexistence of **ammonia**. High thermal resistant catalyst with 50% higher pore vol. than conventional catalysts.
Dwg.0/3
FS CPI
FA AB; DCN
MC CPI: E11-Q02; E31-H01; E32-A02; E35-K; E35-N; E35-Q; J01-E02D; J04-E04; N03-B01; N03-C01; N03-C02; N03-D02

L2 ANSWER 21 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
Full Text
AN 1992-138650 [17] WPIDS
DNC C1992-064505
TI Tert. butylamine prepn. for pharmaceuticals - by reacting isobutene and **ammonia** using silica titania catalyst for high yield and high reaction prod..
DC B05 E16
PA (MITK) MITSUI TOATSU CHEM INC
CYC 1
PI JP 04082864 A 19920316 (199217)* 4p
JP 2866720 B2 19990308 (199915) 3p C07C211-07
ADT JP 04082864 A JP 1990-193908 19900724; JP 2866720 B2 JP 1990-193908 19900724
FDT JP 2866720 B2 Previous Publ. JP 04082864

h eb c g cg b cg eb

PRAI JP 1990-193908 19900724
IC B01J021-02; B01J023-06; C07B061-00; C07C209-16; C07C211-07
ICM C07C211-07
ICS B01J021-02; B01J021-06; B01J021-08; B01J023-06; C07C209-16; C07C209-60
ICA C07B061-00
AB JP 04082864 A UPAB: 19931006
Prepn. comprises reacting isobutene or tert. butanol, and **ammonia**, using catalyst of oxides (exclusive of combination of silica and alumina) of silica, titania, zirconia, alumina, yttria, magnesia, zinc-, molybdenum-, chromium-, tungsten-, and boron-oxides. Pref. mol ratio of isobutene or t-butyl alcohol and **ammonia** (C4/NH3) is 1/1-1/4, reaction temp. is 250-350 deg.C with reaction pressure of 10 kg/cm^2 - 300 kg/cm^2.
USE/ADVANTAGE - Useful for pharmaceutical prod.
In an example, **titanium** tetrachloride is added to ice-**water** to form hydrochloric aq. soln. of **titanic acid**, and **ammonia-water** is added for control of pH. Hydrogel of titania and silica is added to form ppte., and cleaned with **water** to form paste of hydrogel. Paste is extruded at 120 deg.C for 6 hrs. to form catalyst contg. 72 wt.% of SiO2 and 28 of TiO2. Catalyst (50 ml) is filled in reactor, and heated at 265 deg.C with addn. of mixt. of isobutene and **ammonia** (C4/NH3 = 1/2), and reacted at 100 kg/cm^2 pressure. Analysis of reaction prod. shows 19% conversion rate of isobutene, and 96% selectivity of t-butylamine. (0/0) 0/0
FS CPI
FA AB; DCN
MC CPI: B10-B04B; E10-B04C; N01; N03

L2 ANSWER 22 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
Full Text
AN 1988-347846 [49] WPIDS
DNC C1988-153747
TI Denitrification catalyst for catalytic redn. using **ammonia** - comprising **titanium** oxide and oxide(s) e.g. molybdenum, tungsten and e.g. vanadium, copper.
DC E36 J01
IN AKAMA, H; KATO, Y; KONISHI, K; MATSUDA, T; TESHIMA, N
PA (HITG) BABCOCK-HITACHI KK
CYC 7
PI EP 294204 A 19881207 (198849)* EN 13p
R: AT DE FR GB IT
JP 01070144 A 19890315 (198917)
US 4966882 A 19901030 (199046) 10p
US 5087600 A 19920211 (199209)# 11p
EP 294204 B1 19931110 (199345) EN 15p B01D053-36
R: AT DE FR GB IT
DE 3885512 G 19931216 (199351) B01D053-36
JP 2991431 B2 19991220 (200005) 11p B01J023-28
ADT EP 294204 A EP 1988-305054 19880603; JP 01070144 A JP 1988-138034 19880604; US 4966882 A US 1988-201536 19880602; US 5087600 A US 1990-589452 19900927; EP 294204 B1 EP 1988-305054 19880603; DE 3885512 G DE 1988-3885512 19880603, EP 1988-305054 19880603; JP 2991431 B2 JP 1988-138034 19880604
FDT DE 3885512 G Based on EP 294204; JP 2991431 B2 Previous Publ. JP 01070144
PRAI JP 1987-141176 19870605; JP 1988-138034 19880604
REP A3...8938; DE 2458888; EP 220416; No-SR.Pub; DE 21458888
IC B01D053-36; B01J021-06; B01J023-22
ICM B01D053-36; B01J023-28
ICS B01J021-06; B01J023-22; B01J023-24; B01J023-30; B01J023-34; B01J023-70; B01J023-88
AB EP 294204 A UPAB: 19930923
Denitrification catalyst (I) comprises TiO2, at least one (II) of V, Cu, Fe or Mn and at least one oxide (III) of Mo, W or Sn. Total mole numbers

h eb c g cg b cg eb

of oxide (III) in catalyst (I) is 2-20 X 10 power (-6) moles sq.m. of the specific surface area of (I). Pref. (I) is e.g. obtd. by addn. of a cpd. of V, Cu, Fe and/or Mn to **titanic acid** followed by kneading, drying and calcining the mixt. at 300-600 deg.C. Mo03 esp. is then added and the mixt. is wet-kneaded, moulded, dried and calcined at 400-600 deg.C. at to obtain catalyst (I).

USE/ADVANTAGE - (I) are esp. used to treat exhaust gases obtd. from fossil fuel combustion, and have high strength, good performance and low deterioration rates even when gas treated contains sulphur oxides, vapours of heavy metal oxides e.g. oxides of Pb, Se, As etc. and boiler ash. Amts. of (I) (I) needed are lower than in prior art.

0/5

FS CPI

FA AB; DCN

MC CPI: E11-Q02; E31-H01; E32-A02; E35-A; E35-K02; E35-N; E35-S; E35-U02; J01-E02D; J04-E04; N02-A; N03-B; N03-C; N03-E

L2 ANSWER 23 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 1988-051208 [08] WPIDS

CR 1988-092881 [14]

DNC C1988-022632

TI Catalyst contg. **titanium** and other metal, with different dia. pores - for removing oxide(s) of nitrogen from exhaust gas, e.g. furnace gas.

DC E36 H09 J01 J04 M24

IN MISHINA, K; NAGANO, K; NAKATSUJI, T; RIKIMARU, H; SHIMIZU, H; UMABA, T; FUKUDA, M; HANADA, M; IMANARI, M; KOSHIKAWA, T; YAMAUCHI, A

PA (CACH) CATALYSTS & CHEM IND KK; (MITO) MITSUBISHI JUKOGYO KK; (MITP) MITSUBISHI PETROCHEMICAL CO LTD; (MITP) MITSUBISHI RETROCHEM KK; (SAKI) SAKAI CHEMICAL IND KK; (SAKI) SAKAI CHEM IND CO LTD; (NISH) CATALYSTS & CHEM IND CO LTD; (MITP) MITSUBISHI PETROCHEMICAL ENG CO LTD; (CACH) CATALYSTS & CHEM INC; (MITP) MITSUBISHI PETROCHEMICALS IND; (NISH) SHOKUBAI KASEI KOGYO KK

CYC 11

PI	EP 256359	A	19880224 (198808)*	EN	20p	
	R: AT BE DE FR GB IT NL SE					
	JP 63031540	A	19880210 (198812)			
	JP 63147547	A	19880620 (198830)			
	JP 63185448	A	19880801 (198836)			
	US 4859439	A	19890822 (198942)		7p	
	US 4891348	A	19900102 (199009)		9p	
	US 4977127	A	19901211 (199101)			
	CA 1291743	C	19911105 (199151)			
	CA 1297470	C	19920317 (199217)			
	EP 256359	B1	19920520 (199221)	EN	19p	B01D053-36
	R: AT BE DE FR GB IT NL SE					
	DE 3779209	G	19920625 (199227)			B01D053-36
	CA 1310005	C	19921110 (199251)			B01D053-36
	JP 05066175	B	19930921 (199340)		5p	B01J023-28
	JP 05074414	B	19931018 (199344)		4p	B01J023-30

ADT EP 256359 A EP 1987-110763 19870724; JP 63031540 A JP 1986-173812 19860725; JP 63147547 A JP 1986-251587 19861024; JP 63185448 A JP 1987-246578 19870930; US 4859439 A US 1987-102639 19870930; US 4891348 A US 1987-77644 19870724; US 4977127 A US 1989-393071 19890807; EP 256359 B1 EP 1987-110763 19870724; DE 3779209 G DE 1987-3779209 19870724, EP 1987-110763 19870724; CA 1310005 C CA 1987-546531 19870910; JP 05066175 B JP 1986-173812 19860725; JP 05074414 B JP 1986-251587 19861024

FDT DE 3779209 G Based on EP 256359; JP 05066175 B Based on JP 63031540; JP 05074414 B Based on JP 63147547

PRAI JP 1986-234031 19860930; JP 1986-173812 19860725; JP 1986-178346 19860729; JP 1986-251587 19861024; JP 1986-216355 19860913

REP 1.Jnl.Ref; DE 3433197; EP 15801; FR 2254367; JP 51087165; US 4140654

IC ICM B01D053-36; B01J023-28; B01J023-30

h eb c g cg b cg eb

ICS B01D053-56; B01J008-00; B01J021-06; B01J023-22; B01J023-24; B01J035-10; C01B017-00

AB EP 256359 A UPAB: 19960315

A catalyst contg. Ti and another metal as the catalytically active metals, has (a) a 1st gp. of many pores of dia. from 1 x 10 power 2 Angstrom to less than 1 x 10 power 3 Angstrom; and (b) a 2nd gp. of many pores of dia. 1 x 10 power 3 - 1.2 x 10 power 5 Angstrom; the pore vol. of the 1st gp. is at least 10% of the total pore vol. of the 1st and 2nd gps..

Pref. (a) the pore vol. of the 1st gp. of pores is 10-90% of the total pore vol., and those pores with dia. 1-2 x 10 power 2 Angstrom have pore vol. of 10-30% of the total pore vol. (b) The pore vol. of the 2nd gp. of pores is 10-90% of the total pore vol., and those pores with dia. 1 x 10 power 3 - 3 x 10 power 4 Angstrom have pore vol. of 20-40% of the total pore vol. The pore vol. of the catalyst is 0.1-0.7 (0.3-0.45) ml/g. The base metal is Mo, V, W, Mn, Co, Cu, Fe, Cr, Ni, Zn or Sn, in atomic ratio of Ti : base metal of 1 : 0.001-1 (1 : 0.01-1, or 1 : 0.001-0.3 with (V).

USE/ADVANTAGE - Use of the catalyst for removing oxides of N from an exhaust gas is claimed. The exhaust gas may be from a fixed combustion device, e.g. a sintering furnace, coke furnace or boiler. The catalyst is not easily poisoned or blocked by cpds. of As and/or Ca in the exhaust gas.

Dwg.0/4

Dwg.0/4

FS CPI

FA AB; DCN

MC CPI: E31-H01; H09-X; J04-E04; M24-A01B; N02; N03; N03-B

L2 ANSWER 24 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 1985-126559 [21] WPIDS

DNC C1985-055126

TI Producing spherical titania particles - using ammoniacal **titanium** salt hydrosol to which particulate titania or **titanic acid** is added.

DC E32

PA (FUJI-N) FUJI TITANIUM IND CO LTD

CYC 1

PI JP 60065725 A 19850415 (198521)* 4p

JP 62009532 B 19870228 (198712)

ADT JP 60065725 A JP 1983-173983 19830920

PRAI JP 1983-173983 19830920

IC B01J020-06; B01J021-06; B01J035-08; C01G023-04

AB JP 60065725 A UPAB: 19930925

Ammonia precursor capable of being decomposed into **ammonia** by the elevation of temp., if necessary is dissolved in hydrosol obtd. by adjusting the pH of aq. **titanium** (IV) salt soln. to 0.6-2.0, dispersing fine **titanium** oxide or **titanic acid** particles into it, forming a spherical hydrogen in a heated medium immiscible with **water**, and ageing, washing and drying it, if necessary, calcining.

In an example, to one l of aq. titanyl sulphate soln. of 200 g/l in TiO2 conc. was added gradually 13.2 N aq. **ammonia** soln. until the pH became 1.7. This was allowed to stand for a night to obtain translucent titania sol. Into the sol. was dissolVed 40g of hexamethylenetetramine and the concn. of the sol. was adjusted to 80 g/l, and to the sol. was added 60 g **titanium** oxide particle (particle size: 0.16 microns, surface area 37 sq.m/g. The sol. was introduced into a granulation column (80 cm height) filled with a mixed medium consisting of trichlorobenzene and kerosine, through a nozzle of the bottom, under pressure. The sol. was heated with the medium at 120 deg. C and formed into spherical hydrogel of 2-3 mm in dia. The hydrogen was sepd. from the medium and allowed stand for 4 hrs. in 40% wt. aq. ammonium nitrate soln. Then the hydrogen was washed well with **water** and dried at 50 deg. C. The particles so obtd. were near true spheres.

h eb c g cg b cg eb

0/0
FS CPI
FA AB
MC CPI: E35-K

L2 ANSWER 25 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
Full Text
AN 1982-10784E [06] WPIDS
TI De nitrating catalyst - comprising **titanium**, tungsten and/or magnesium and vanadium.
DC A97 E36 J01
PA (MITO) MITSUBISHI HEAVY IND CO LTD; (MITP) MITSUBISHI PETROCHEMICAL CO LTD; (NISH) SHOKUBAI KASEI KOGYO KK
CYC 2
PI JP 56168835 A 19811225 (198206)* 8p
US 4466947 A 19840821 (198436)
JP 63048584 B 19880929 (198843)
ADT JP 56168835 A JP 1980-72170 19800531; US 4466947 A US 1983-456398 19830107
PRAI JP 1980-72170 19800531
IC B01D027-02; B01D053-36; B01J008-00; B01J023-30; B01J027-05; C01B021-00
AB JP 56168835 A UPAB: 19930915
NOx in a waste gas is effectively and economically reduced to remove it from the gas. The catalyst consists of a **titanium** component (A), a tungsten and/or magnesium component (B), and a vanadium component (C).

The **titanium** or tungsten component is present as its oxide in the catalyst, and the magnesium or vanadium component is contained as oxide or sulphate. Atomic ratio of (B)/(A) is 0.01- 1. The catalyst comprises a shaped type porous material consisting of a mixt. of oxide of (A) and oxide or sulphate of (B). 0.1- 15 wt.% of (C) is scatteringly contained in the catalyst in below 500 microns depth of the catalyst surface.

In an example, **titanic acid** and ammonium paratungstate were mixed with a binder of polyethylene oxide in the pressure of **water**, heated and shaped to a honeycomb type body. The body was immersed in monoethanol **amine**, then immersed in a soln. of vanadyl oxalate, dried at 1110 deg. C and calcined at 500 deg. C to obtain a catalyst for removal of NOx.
FS CPI
FA AB
MC CPI: A12-W11B; E31-H01; E34-B; E35; J01-E02D; J04-E04A; N01-B; N03-B; N03-C

L2 ANSWER 26 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
Full Text
AN 1980-68800C [39] WPIDS
TI Catalyst for redn. of nitrogen oxide(s) - obtd. by calcining mixt. of iron-contg. particles, **titanium** based material and sulphur-contg. cpd..
DC E36 J04
PA (KYUH) KYUSHU REFRACTORIES CO LTD; (YAWA) NIPPON STEEL CORP
CYC 1
PI JP 55106544 A 19800815 (198039)*
PRAI JP 1979-13529 19790208
IC B01D053-36; B01J027-02
AB JP 55106544 A UPAB: 19930902
The catalyst is obtd. by mixing an Fe contg. particle type substance, a Ti contg. substance, and a S contg. substance at 60-90 degrees C in the presence of **water** to obtain in mixt. drying the mixt. and calcining. The Fe contg. substance is a particle type mineral contg. Fe oxide or Fe hydroxide. The Ti contg. substance is **titanic acid**, ti chloride, Ti sulphide, or titanyl sulphate. The S substance is Fe sulphate, sulphite, or sulphide.

The compsn. of the catalyst consists of 35-68 wt. pts. of Fe, 0.6-29 wt. pts. of Ti, and 0.3-15 pts. wt. of S. The catalyst has high mechanical strength, and the structure of the catalyst is formed by

h eb c g cg b cg eb

depositing Fe oxide, Ti oxide and a S cpd. on the Fe contg. particle type substance.

The catalyst is used with **ammonia** to effectively reduce NOx to N2 without disturbing the reduction of NOx by the presence of SOx.

FS CPI
FA AB
MC CPI: E31-H01; E32-A; J01-E02D; J04-E04A; N02-A; N03-B

L2 ANSWER 27 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 1980-02389C [02] WPIDS
TI Moulding **titanium** oxide-contg. cpds. into spherical form - by spraying the cpd. in powdered form with aq. medium onto an inorganic seed, and baking the resulting prod..
DC E32 J04
PA (SUMO) SUMITOMO CHEM CO LTD
CYC 2
PI JP 54149379 A 19791122 (198002)*
US 4321224 A 19820323 (198214)
PRAI JP 1978-58096 19780515
IC B01J002-00; B01J021-06; B01J035-08; D04H003-16
AB JP 54149379 A UPAB: 19930902
In the moulding of a **titanium** oxide-contg. compound, e.g., **titanium** oxide, ortho-**titanic acid**, meta-**titanic acid**, or mixtures of these compounds with vanadium, tungsten, molybdenum, chromium, iron, copper, cerium, etc., which is intended for use in catalysts, into spherical form, a **titanium** oxide-contg. compound powder and an aqueous medium, e.g., **water**, an aqueous solution of a mineral acid, an organic acid **ammonia**, methylamine, various metal salts, alcohols, etc., are sprayed over an inorganic seed in a 1:0.20-0.35 (by weight) addition rate of **titanium** oxide-contg. compound powder and aqueous medium in order to moulded the **titanium** oxide-contg. compound into spherical grains of a desired grain size and then the spherical **titanium** oxide-containing compound grains thus obtained are baked at 650-900 degrees C.

The spherical grains are free of breakdown and pulverisation even when used for a long period of time as catalyst for mobile bed for dust-rich waste gas because of their high mechanical strength, sufficient surface area and fine pore volume necessary for catalyst, and high wear resistance, as well as high catalytic activity.

FS CPI
FA AB
MC CPI: E35-K; J04-A05; J04-E04; N02; N03

L2 ANSWER 28 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 1979-50152B [27] WPIDS
TI **Titanium** oxide body contg. added barium cpd. - useful as catalyst or catalyst support.
DC J04 L02
PA (SUMO) SUMITOMO CHEM CO LTD
CYC 1
PI JP 54066908 A 19790529 (197927)*
PRAI JP 1977-133834 19771107
IC B01J021-06; C04B035-00
AB JP 54066908 A UPAB: 19930901
In the shaping of a compsn. contg. **titanium** oxide into a body a barium cpd. is added to the compsn. so that the atomic ratio of Ti:Ba becomes 100:0.1-20.

A **titanium** oxide body with high mechanical strength, high abrasion, resistance, large surface area and vol. of minute pores, can be prepd. It can be used as a catalyst carrier or as catalyst by mixing with other components.

h eb c g cg b cg eb

Typically ortho- or meta-**titanic acid** obtd. by the hydrolysis of **titanium** tetrachloride or **titanium** sulphate is burned at 300-1000 degrees C (pref. 300-800 degrees C) and pulverised using vibration ball mill.

Alumina, kieselguhr, bentonite, silica gel, etc. can be added to the compsn. in an amt. of up to 10 wt.% The Ba cpd. BaCl2, Ba(NO3)2, Ba(NO2)2, Ba(ClO4)2, etc. The mixed compsn. can be pelletised easily by itself, or its kneaded matter with the addn. of 20-35 wt.% of aq. medium (e.g., **water**, aq. soln. of salts, acids, **ammonia**, **amine**) is pressed out and granulated, and dried and burned.

FS CPI
FA AB
MC CPI: J04-E03; J04-E04; L02-G; N01-B; N03-B

L2 ANSWER 29 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 1977-80009Y [45] WPIDS
TI Prepn. of adsorbent for uranium - by depositing **titanium** cpd., hydrolysable to **titanic acid**, on porous particles and hydrolysing.
DC D15 E31 E32 K05 M25
PA (AGEN) METAL MINING AGENCY
CYC 1
PI JP 52114587 A 19770926 (197745)*
PRAI JP 1976-31399 19760324
IC B01D015-00; C22B060-02
AB JP 52114587 A UPAB: 19930901
Prepn. of adsorbent (I) for uranium comprises bonding a Ti cpd. (II), which can be converted to **titanic acid** by hydrolysis, to porous inorganic particles (III) having surface OH gps. and by forming a film of **titanic acid** on the surface of (III) by hydrolysis of (II).

(I) can adsorb uranium selectively. (I) has high mechanical strength and high uranium adsorbing capacity. (I) is used for collection of uranium from sea **water**.

(III) is typically a material having a particle dia. of 0.2-1 mm and a specific surface area of 5-100 m2/g, such as zeolite, silica gel, diatomaceous earth, active bcarbon etc. Representative examples of (II) are **titanium** tetrachloride, titanyl chloride, **titanium** sulphate, titanyl sulphate tetrapropyl ortho titanate, triethanol amien titanate etc. (IIe is bonded to the surface of (III) by contacting (III) with vapour of (II) or by soaking (III) in aq. soln. of (II). After bonding (II) with (III), (II) is hydrolysed in contact with alkali soln. such as NH3 or NaOH soln. or heating to 100C with compounds, which generate **ammonia** at a high temp. such as urea or ammonium carbonate.

FS CPI
FA AB
MC CPI: D04-B05; E35-K; E35-R; K05-B04A; M25-B; M25-G25

L2 ANSWER 30 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 1973-23979U [17] WPIDS
TI **Titanium** electroplate - as corrosion protective surface for steel, zinc etc.
DC M11
PA (SUMQ) SUMITOMO METAL IND LTD
CYC 1
PI JP 48012303 B (197317)*
PRAI JP 1968-14464 19680305
IC C23B000-00
AB JP 73012303 B UPAB: 19930831
Electrolysis is effected in an aq. soln. consisting of 0.5-80 g/l **titanic acid** or added pertitanate ion, with 1-20 g/l carboxylic acids, **amines**, or salts or sugars thereof and using electrodes of steel, zinc,

h eb c g cg b cg eb

zinc-plated steel plate, etc. at 10-90 degrees C, current density 1-80 A/dm2 for 0.5sec - 10 min to form **titanium** bearing corrosion resistant film. A corrosion resistant film of excellent quality which showed no surface rust after 8 hrs. when subjected to a salt **water** spray test (JIS Z-2371) whereas conventional film surfaces rusted after 6 hrs.

FS CPI
FA AB
MC CPI: M11-F

L2 ANSWER 31 OF 31 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

Full Text

AN 1971-02849S [02] WPIDS
TI Paper of non-woven web with resistance to - **water**.
DC A11 A16 A97 F09
PA (KURS) KURARAY CO LTD
CYC 1
PI JP 46000405 B (197102)*
PRAI JP 1968-46315 19680703
AB JP 71000405 B UPAB: 19930831
The paper or non-woven web of polyvinyl alcohol synthetic fibres having **water** dissolving temp. less than 85 degrees C is treated with a **water**-contg. alcohol soln. of **titanic acid** contg. more than 40% of alcohol and a mineral acid such as hydrochloric and sulphuric acid. The **water**-contg. alcohol soln. of **titanic acid** is prepd. by adding more than 40% monohydric or ethyl or polyhydric alcohol to an aqs. soln. of **titanium** tetrachloride or a soln. which is prepd. by adding the alcohol to a mineral acid soln. contg. a solid obtained by adding an aqs. **ammonia** soln. to **titanium** tetrachloride soln.
FS CPI
FA AB
MC CPI: A10-E09B; A12-S05G; A12-W06; F02-C01; F03-C02; F05-A06

=>

h eb c g cg b cg eb